

Title (en)

Tunable optical filter based on a deformable diffractive element

Title (de)

Durchstimmbares optisches Filter basierend auf einem verformbaren diffraktiven Element

Title (fr)

Filtre optique accordable sur la base d'un élément diffractif déformable

Publication

EP 1365279 B1 20051130 (EN)

Application

EP 03001966 A 20030130

Priority

US 14654302 A 20020514

Abstract (en)

[origin: EP1365279A2] The tunable optical filter includes an elastic substrate (104), a diffractive element (102) in the elastic substrate, an actuator (106) for stretching the elastic substrate to control the pitch of the diffractive element, a first optical path (110) and a second optical path (112). The diffractive element optically couples the second optical path to the first optical path at an optical frequency determined by the pitch of the diffractive element. <IMAGE>The tunable optical filter includes an elastic substrate (104), a diffractive element (102) in the elastic substrate, an actuator (106) for stretching the elastic substrate to control the pitch of the diffractive element, a first optical path (110) and a second optical path (112). The diffractive element optically couples the second optical path to the first optical path at an optical frequency determined by the pitch of the diffractive element. <IMAGE>

IPC 1-7

G02F 1/29; **G02B 5/18**

IPC 8 full level

G02B 26/00 (2006.01); **G01J 3/18** (2006.01); **G02B 5/18** (2006.01); **G02B 6/34** (2006.01); **G02B 26/08** (2006.01)

CPC (source: EP US)

G01J 3/18 (2013.01 - EP US); **G02B 5/18** (2013.01 - EP US); **G02B 6/2931** (2013.01 - EP US); **G02B 6/29314** (2013.01 - EP US); **G02B 6/4246** (2013.01 - EP US); **G02B 26/0808** (2013.01 - EP US)

Cited by

EP2211154A1; EP3249442A1; US8786853B2; WO2010084174A3

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 1365279 A2 20031126; **EP 1365279 A3 20031203**; **EP 1365279 B1 20051130**; DE 60302492 D1 20060105; DE 60302492 T2 20060817; JP 2004004832 A 20040108; US 2003215183 A1 20031120; US 7027688 B2 20060411

DOCDB simple family (application)

EP 03001966 A 20030130; DE 60302492 T 20030130; JP 2003132493 A 20030512; US 14654302 A 20020514